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PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			EXAMINER SHAW, YIN CHEN	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/827,593	Applicant(s) HAMALAINEN ET AL.	
	Examiner Yin-Chen Shaw	Art Unit 2439	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/09/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19, 21, 23-28, 31-53, 55-59, 61-70, 74-82, 84-94, 96-97 and 122-156 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19, 21, 23-28, 31-53, 55-59, 61-70, 74-82, 84-94, 96-97, and 122-156 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This written action is responding to the Request for Continued Examination (RCE) dated on 01/09/2009.
2. Claims 19, 59, 62-64, 74-82, 85-94, 122, 124-132, and 135 have been amended. Claims 136-156 are newly added claims.
3. Claims 19, 21, 23-28, 31-53, 55-59, 61-70, 74-82, 84-94, 96-97, and 122-156 have been examined and rejected.
4. Claims 19, 21, 23-28, 31-53, 55-59, 61-70, 74-82, 84-94, 96-97, and 122-156 are pending.

Continued Examination Under 37 CFR 1.114

5. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Jan. 09, 2009 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 19, 21, 23, 27-28, 36, 48, 55-59, 61-62, 65, 68, 74, 77-79, 81-82, 84-87, 90-91, 93-94, 96, 122-124, 128, 132-134, 136-139, 142, and 148, 152-153, and 156 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasuta et al. (U. S. Patent 5,502,767) and further in view of Talbot (U.S. Patent 4,555,805).

As per claims 19, 59, 65, and 82:

Sasuta et al. disclose “a method and apparatus for use within a mobile station for determining a ciphering mode of data communication between a mobile communication network and a mobile station, the mobile station being capable of communication in at least one enciphered mode of communication and in at least one enciphered mode of communication” in (Col. 3, lines 23-39; Fig. 1), “the method comprising:

“monitoring at the mobile station signals received from the mobile communication network for a cipher mode control signal, the cipher mode control signal is for setting the mobile station into an enciphered mode of communication” (Col. 3, lines 23-39; Col. 3, line 60 to Col. 4, line 17; Fig. 1);

“responsive to reception of a cipher mode control signal from the mobile communication network, setting the mobile station into an enciphered mode of communication” (Col. 4, lines 60-65).

Sasuta et al. do not expressly disclose the remaining limitation of the claim. However, Talbot discloses “indicating to a user of the mobile station that the mobile communication network is configured to use an enciphered mode of communication” (Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25; Col. 9, lines 39-50, *where users are being indicated that the cipher mode is to be applied with higher cost*).

Therefore, it would have been obvious at the time of invention was made for having ordinary skill in the art to modify Sasuta's teaching with Talbot since one would be motivated to maintaining secure information synchronization on a control channel that will not reduce the efficiency of a secure radio communication system (Col. 2, lines 32-34 from Sasuta et al.).

As per claims 21 and 61:

Sasuta et al. and Talbot disclose "a method and apparatus according to claims 19 and 59, further comprising the step of indicating that to a user of the mobile station that the mobile communication network is configured to use an unciphered mode of communication if no cipher mode control signal is received at the mobile station from the mobile communication network" in and (Col. 4, lines 9-11 from Sasuta et al.) and (Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25; Col. 9, lines 39-50 from Talbot).

As per claims 23 and 62:

Sasuta et al. and Talbot disclose "a method and apparatus according to claims 19 and 59, wherein the apparatus is configured to determine the ciphering mode to be used in communication between the mobile communication network and the mobile station during establishment of

communication between the mobile communication network and the mobile station (Col. 4, lines 39-59 from Sasuta et al.) and (Col. 10, lines 9-30 from Talbot).

As per claim 27:

Sasuta et al. and Talbot disclose “a method according to claim 19, further comprising:

maintaining a cipher mode indication data field in the mobile station;

initially setting said cipher mode indication data field into a first state indicative the mobile communication network is configured to use an unciphered mode of communication; and

responsive to reception of a cipher mode control signal from the mobile communication network, updating the state of the cipher mode indication data field into a second state indicative that the mobile communication network is configured to use an enciphered mode of communication” in (Col. 4, lines 4-59 from Sasuta et al.) and (Col. 3, line 60 to Col. 4, line 12 and Col. 9, lines 30-55 from Talbot).

As per claims 28 and 68:

Sasuta et al. and Talbot disclose “a method and apparatus according to claims 19 and 59, further comprising indicating a ciphering mode, a change in ciphering mode to a user of the mobile station” in (Col. 11, line

59 to Col. 12, line 3 and Col. 8, lines 3-25; Col. 9, lines 39-50 from Talbot).

As per claims 36 and 74:

Sasuta et al. and Talbot disclose “an apparatus according to claims 19 and 59, wherein the mobile stations comprises of: a radio resource management block and a cipher indication memory block, wherein said means for monitoring signals sent from the mobile communication network to the mobile station and said means for determining if said monitored signals comprise a cipher mode control signal are arranged in the radio resource management block and a cipher mode indication data field is maintained in the cipher indication memory block, the radio resource management block being further arranged to set the cipher mode indication data field in said cipher indication memory block to correspond with cipher indication data in a cipher mode control signal received from the mobile communication network”.

(Col. 3 line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.) and (Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25; Col. 9, lines 39-50 from Talbot).

As per claim 48:

Sasuta et al. and Talbot disclose “a method according to claim 19, wherein a first mobile station and a second mobile station are in communication with each other through at least one mobile communication network, the method comprising indicating the ciphering mode between the mobile communication network and the first mobile station to a user of the second mobile station” (Col. 3 line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.) and (Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25; Col. 9, lines 39-50 from Talbot).

As per claim 55:

Sasuta et al. and Talbot disclose “a method according to claim 19, comprising using the mobile station in communication with a terminal in a fixed line communication network, and the method further comprising indicating a ciphering mode used in communication between the fixed line communication network and the terminal in the fixed line communication network to a user of the mobile station” in (Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25; Col. 9, lines 32-50; Col. 10, lines 10-22 from Talbot) and (Col. 3, lines 35-39 and Fig. 1 from Sasuta et al.).

As per claim 56:

Sasuta et al. and Talbot disclose “a method according to claim 55, wherein the mobile station sends an inquiry message to the terminal in the fixed line communication network to determine the ciphering mode used in communication between the fixed line communication network and said terminal in the fixed line network” in (Col. 4, lines 18-29 from Sasuta et al.) and (Col. 3, line 60 to Col. 4, line 12; Col. 10, lines 10-22 from Talbot).

As per claim 57:

Sasuta et al. and Talbot disclose “a method according to claim 56, wherein if the mobile station does not receive a response to said inquiry message, the mobile station indicates that the ciphering mode is unknown” in (Col. 9 lines 45-50 and 67-68; Col. 10, lines 1-8 from Talbot) and (Col. 5 lines 5-18 from Sasuta et al.).

As per claim 58:

Sasuta et al. and Talbot disclose “a method according to claim 55, wherein if the mobile station receives a response to said inquiry message, but cannot interpret said response the mobile station indicates that the ciphering mode is unknown” in (Col. 4, lines 58-68 from Talbot) and (Col. 5, lines 19-29 from Sasuta et al.).

As per claims 77, 79, 81, 87, and 93:

Sasuta et al. and Talbot disclose “an apparatus according to claims 76, 78, 80, 86, and 92, further comprising a cipher mode indicator, the user interface block being arranged to control the cipher mode indicator according to said indication” in (Col. 3, lines 27-39; Col. 3, line 60 to Col. 4, line 17; Fig. 1 from Sasuta et al.) and (Col. 4, lines 40-54; Col. 11, line 59 to Col. 12, line 3; Col. 8, lines 3-25; Col. 9, lines 32-50 from Talbot).

As per claims 78, 90, and 91:

Sasuta et al. and Talbot disclose “an apparatus according to claims 74, 86, and 90, further comprising a user interface block, wherein the cipher indication memory block provides an indication of the state of said cipher mode indication data field to the user interface block when the state of said cipher mode indication data field is changed” in (Col. 3, lines 27-39; Col. 3, line 60 to Col. 4, line 38; Fig. 1 from Sasuta et al.) and (Col. 4, lines 40-54; Col. 11, line 59 to Col. 12, line 3; Col. 8, lines 3-25; Col. 9, lines 32-50 from Talbot).

As per claim 84:

Sasuta et al. and Talbot disclose “a mobile station according to claim 82 wherein said means responsive to said determining means for indicating

a ciphering mode to a user of the mobile station are further configured to indicate that the mobile communication network is configured to use an unciphered mode of communication, if said monitored signals do not comprise a cipher mode control signal” in (Col. 3, lines 27-39; Col. 3, line 60 to Col. 4, line 38; Col. 5, lines 13-18; Fig. 1 from Sasuta et al.) and (Col. 4, lines 40-54; Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25; Col. 9, lines 32-50; Col. 10, lines 10-22 from Talbot).

As per claims 85 and 94:

Sasuta et al. disclose “a system for determining a ciphering mode of communication between a mobile communication network and a mobile station in the mobile communication network, the mobile station being capable of communication in at least one enciphered mode of communication and at least one unciphered mode of communication” in (Col. 3 line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.), the system comprising:

means in the mobile communication network for determining whether an enciphered mode of communication is to be used in communication between the mobile communication network and the mobile station according to a setting of the mobile communication network (Col. 3 line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.);

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means in the mobile communication network for sending a cipher mode control signal from the mobile communication network to the mobile station in a situation where an enciphered mode of communication is to be used in communication between the mobile communication network and the mobile station (Col. 3, lines 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.);

means in the mobile station for determining if signals comprise a cipher mode control signal; and means responsive to said determining means for indicating that an enciphered mode of communication is to be used in communication between the mobile communication network and the mobile station, if said monitored signals comprise a cipher mode control signal (Col. 3 line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.).

Sasuta et al. do not expressly disclose the remaining limitation of the claim. However, Talbot discloses “means for indicating a ciphering mode to a user of the mobile station, comprising means for indicating that the mobile communication network is configured to use an enciphered mode of communication if said monitored signals comprise a cipher mode control signal and means for indicating that the mobile communication network is configured to use an unciphered mode of communication if said monitored signals do not comprise a cipher mode

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control signal” (Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25; Col. 9, lines 39-50 from Talbot).

Therefore, it would have been obvious at the time of invention was made for having ordinary skill in the art to modify Sasuta’s teaching with Talbot since one would be motivated to maintaining secure information synchronization on a control channel that will not reduce the efficiency of a secure radio communication system (Col. 2, lines 32-34 from Sasuta et al.).

As per claim 86:

Sasuta et al. and Talbot disclose “a mobile station according to claim 85, comprising a radio resource management block and a cipher indication memory block comprising a cipher mode indication data field, the radio resource management block being set the cipher mode indication data field in said cipher indication memory block into one of a first state and a second state, said first state being indicative that the mobile communication network is configured to use an unciphered mode of communication and said second state being indicative that the mobile communication network is configured to use an enciphered mode of communication” in (Col. 3, line 60 to Col. 4, line 17 and Col. 5, lines 5-18 from Sasuta et al.) and (Col. 8, lines 3-25 and Fig. 1 from Talbot)

As per claim 96:

Sasuta et al. and Talbot disclose “a system according to claim 94, wherein said means for indicating a ciphering mode to a user of the mobile station are further configured to indicate that the mobile communication network is configured to use an unciphered mode of communication, if said monitored signals do not comprise a cipher mode control signal” in (Col. 3, line 60 to Col. 4, line 17; Col. 5, lines 5-18; Fig. 1 from Sasuta et al.) and (Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25 from Talbot).

As per claims 122-123, 132 and 136:

Sasuta et al. disclose an apparatus for determining a ciphering mode of communication between a mobile communication network and a mobile station, the mobile station being capable of communication in at least one enciphered mode of communication and at least one unciphered mode of communication (Col. 3, line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.).

Sasuta et al. further disclose the mobile communication network is configured to use an enciphered mode of communication, a cipher mode indicator for indicating that the mobile communication network is configured to use an enciphered mode of communication, and signals sent from the mobile communication network to the mobile station

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determining if monitored signals comprise a cipher mode control signal (Col. 3, line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.).

Sasuta et al. do not expressly disclose a radio resource management block . However, Talbot discloses a radio resource management block for monitoring signals (Col. 8, lines 3-25; Col. 9, lines 32-50; Fig. 1 from Talbot) and indicating a ciphering ode to a user of the mobile station that the mobile communication network is configured to use an enciphered mode of communication responsive to an indication from the radio resource management block that said monitored signals comprise a cipher mode control signal” (Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25; Col. 9, lines 39-50; Col. 10, lines 10-29 from Talbot).

Therefore, it would have been obvious at the time of invention was made for having ordinary skill in the art to modify Sasuta’s teaching with Talbot since one would be motivated to maintaining secure information synchronization on a control channel that will not reduce the efficiency of a secure radio communication system (Col. 2, lines 32-34 from Sasuta et al.).

As per claims 124:

Sasuta et al. and Talbot disclose “an apparatus according to claim 122, comprising a cipher indication memory block having a cipher mode

indication data field, the radio resource management block being configured to set the cipher mode indication data field of said cipher indication memory block to correspond with cipher indication data in a cipher mode control signal received from the mobile communication network” in (Col. 3, line 60 to Col. 4, line 17 and Col. 5, lines 5-18 from Sasuta et al.) and (Col. 8, lines 3-25 and Fig. 1 from Talbot).

As per claims 128:

Sasuta et al. and Talbot disclose “an apparatus according to claim 124, further comprising a user interface block, wherein the cipher indication memory block is operable to provide an indication of the state of said cipher mode indication data field to the user interface block when the state of said cipher mode indication data field is changed” in (Col. 9, lines 39-50 and 67-68; Col. 10, lines 1-8; Col. 8, lines 3-25 and Fig. 1 from Talbot) and (Col. 3, line 24-39; Col. 3, line 60 to Col. 4, line 17; Fig. 1 from Sasuta et al.).

As per claims 133:

Sasuta et al. and Talbot disclose “a system according to claim 94, wherein the ciphering mode to be used in communication between the mobile communication network and the mobile station is specified by an

operator of the mobile communication network” in (Col. 10, lines 9-30 from Talbot).

As per claims 134:

Sasuta et al. and Talbot disclose “a system according to claim 94, wherein communication between the mobile communication network and the mobile station takes place at least in part over a radio link” in (Fig.1 from Sasuta et al.).

As per claims 137:

Sasuta et al. and Talbot disclose “a mobile station according to claim 136, wherein the user interface block is configured to control the cipher mode indicator to inform a user that the mobile communication network is configured to use an unciphered mode of communication, responsive to determination by the radio resource management block that said received signals do not comprise a cipher mode control signal” in (Col. 3, line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.) and (Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25; Col. 9, lines 39-50; Col. 10, lines 10-29 from Talbot).

As per claims 138:

Sasuta et al. and Talbot disclose “a mobile station according to claim 136, wherein the mobile station is configured to determine a ciphering mode to be used in communication between the mobile communication network and the mobile station during establishment of communication between the mobile communication network and the mobile station” in (Col. 3, line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.).

As per claims 139:

Sasuta et al. and Talbot disclose a mobile station according to claim 136, wherein the mobile station is configured to determine a ciphering mode to be used in communication between the mobile communication network and the mobile station prior to establishment of communication between the mobile communication network and the mobile station” in (Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25; Col. 9, lines 39-50; Col. 10, lines 10-29 from Talbot).

As per claims 142:

Sasuta et al. and Talbot disclose “a mobile station according to claim 136, wherein the mobile station is configured to inform a user of a

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change in ciphering mode” in (Col. 3, line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.) and (Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25; Col. 9, lines 39-50; Col. 10, lines 10-29 from Talbot).

As per claims 148:

Sasuta et al. and Talbot disclose “a mobile station according to claim 136, wherein the mobile station comprises a cipher indication memory block and the radio resource management block is configured to set a cipher mode indication data field of the cipher indication memory block to correspond with cipher indication data in a cipher mode control signal received from the mobile communication network” in (Col. 8, lines 3-25; Col. 9., lines 39-50 and 67-68; Col. 10, lines 1-8; and Fig. 1 from Talbot) and (Col. 3, line 24-39; Col. 3, line 60 to Col. 4, line 38; Fig. 1 from Sasuta et al.).

As per claims 152:

Sasuta et al. and Talbot disclose “a mobile station according to claim 148, wherein the cipher indication memory block is configured to provide an indication of the state of said cipher mode indication data field to the user interface block when the state of said cipher mode indication data

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field is changed” in (Col. 3, lines 27-39; Col. 3, line 60 to Col. 4, line 38; Fig. 1 from Sasuta et al.) and (Col. 4, lines 40-54; Col. 11, line 59 to Col. 12, line 3; Col. 8, lines 3-25; Col. 9, lines 32-50 from Talbot).

As per claims 153:

Sasuta et al. and Talbot disclose a mobile station according to claim 152, wherein the user interface block is configured to control the cipher mode indicator according to said indication (Col. 3, lines 27-39; Col. 3, line 60 to Col. 4, line 38; Fig. 1 from Sasuta et al.) and (Col. 4, lines 40-54; Col. 11, line 59 to Col. 12, line 3; Col. 8, lines 3-25; Col. 9, lines 32-50 from Talbot).

As per claims 156:

Sasuta et al. disclose “an apparatus for use within a mobile station, the apparatus comprising:

a cipher indication memory block comprising a cipher mode indication data field, the cipher mode indication data field for holding cipher indication data indicative of a ciphering mode used in communication between a mobile station and a mobile communication network” in (Col. 3, lines 23-39; Col. 3, line 60 to Col. 4, line 38; and Col. 5, lines 3-18 from Sasuta et al.).

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an output for providing the cipher indication data to a user interface block of the mobile station responsive to a cipher mode enquiry from the user interface block (Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25; Col. 9, lines 39-50, *where users are being inquired whether the cipher mode is to be applied at higher cost rate*).

Therefore, it would have been obvious at the time of invention was made for having ordinary skill in the art to modify Sasuta's teaching with Talbot since one would be motivated to maintaining secure information synchronization on a control channel that will not reduce the efficiency of a secure radio communication system (Col. 2, lines 32-34 from Sasuta et al.).

7. Claims 24-26, 63-64, and 135 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasuta et al. and Talbot and further in view of Billstrom et al, US Patent No 5590133, hereinafter "Billstrom".

As per claims 24-25 and 63-64:

Sasuta et al. and Talbot disclose "a method and apparatus according to claims 19, 24, 59, and 63". However, Sasuta et al. and Talbot do not expressly disclose "comprising determination of the ciphering mode to be used in communication prior to establishment of data communication

between the mobile communication network and the mobile station is performed by means of a location update procedure”.

Nevertheless, Billstrom discloses the “apparatuses and Mobile stations for providing packet data communication in digital TDMA Cellular Systems” invention, which teaches “the determination of the ciphering mode to be used in data communication prior to establishment of data communication between the mobile communication network and the mobile station is performed by means of a location update procedure” in (Col 9 lines 20-50, and Col 10 lines 45-61).

Therefore, it would have been obvious at the time of the invention was made for one ordinary skill in the art at the time of invention to incorporate Billstrom with ciphering mode teaching in Sasuta et al. and Talbot since one would be motivated to provide shared packet data channels optimized for packet data (lines 48-49, Col. 3 from Billstrom).

As per claim 26:

Sasuta et al. and Talbot disclose “a method according to claim 19. Sasuta et al. and Talbot do not expressly disclose the remaining limitation of the claim. However, Billstrom discloses the “Apparatuses and Mobile stations for providing packet data communication in digital TDMA Cellular Systems” invention, which teaches a method of

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negotiating a cipher mode during a handover process (Col 8 lines 46 to Col 9 line 20, and Col 9 lines 20 to 67).

Therefore, it would have been obvious at the time of the invention was made for one ordinary skill in the art at the time of invention to incorporate Billstrom with ciphering mode teaching in Sasuta et al. and Talbot since one would be motivated to provide shared packet data channels optimized for packet data (lines 48-49, Col. 3 from Billstrom).

As per claims 135:

Sasuta et al. and Talbot disclose a system according to claim 94. Sasuta et al. and Talbot do not expressly disclose the remaining limitation of the claim. However, Billstrom discloses wherein the mobile communication network is a GSM network” in (Col. 1, line 62 from Sasuta et al.).

Therefore, it would have been obvious at the time of the invention was made for one ordinary skill in the art at the time of invention to incorporate Billstrom with ciphering mode teaching in Sasuta et al. and Talbot since one would be motivated to provide shared packet data channels optimized for packet data (lines 48-49, Col. 3 from Billstrom).

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8. Claims 31-34, 66-67, 69, and 97, 143-146 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasuta et al. and Talbot and further view of Lewis et al, US Patent No. 6192255, hereinafter "Lewis".

As per claims 31, 66, and 143:

Sasuta et al. and Talbot disclose "a method and apparatus according to claims 19 and 59, wherein said means for indicating a ciphering mode to a user of the mobile station (Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25; Col. 9, lines 39-50 from Talbot) and Sasuta et al. disclose a display unit (Col. 3, lines 35-39 and Fig. 1 from Sasuta et al.).

Sasuta et al. and Talbot do not disclose indicating the cipher mode to the user comprises the display unit. However, Lewis discloses the mobile station comprises visual display to indicate the secure communication status to the user (Col. 20, lines 10-15 from Lewis).

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to incorporate Sasuta et al. and Talbot with Lewis to display the information for alerting the user.

As per claims 32, 67, and 144-146:

Sasuta et al. and Talbot disclose "a method and apparatus according to claim 19". Sasuta et al. and Talbot do not disclose, "the mobile station comprises a light source the method comprising indicating the ciphering

mode used in communication between the mobile communication network and the mobile station to a user of the mobile station using the light source”. However, Lewis discloses “the mobile station comprises a light source and the ciphering mode used in data communication between the mobile communication network and the mobile station is indicated with the light source” and “change of ciphering mode with flashing light and/or acoustic signal” in (Col 5 lines 10-25; Col 20 lines 10-15; and Col 16 lines 40-67).

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to incorporate Sasuta et al. and Talbot with Lewis to display the information for alerting the user.

As per claims 33 and 69:

Sasuta et al. and Talbot disclose “a method and apparatus according to claims 28 and 68”. Sasuta et al. and Talbot do not disclose, “the mobile station comprises a display unit and an acoustic signal forming element, the method comprising indicating the ciphering mode used in communication between the mobile communication network and the mobile station to a user of the mobile station using the display unit, and indicating a change in ciphering mode to a user of the mobile station using the acoustic signal forming element”. However, Lewis discloses “the mobile station comprises a display unit and an acoustic signal

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forming element, the ciphering mode used in data communication between the mobile communication network and the mobile station is indicated with the display unit, and a change in ciphering mode is indicated with the acoustic signal forming element” in (Col 10 lines 53-67, Col 20 lines 10-15, and Col 16 lines 40-67).

Therefore, it would have been obvious at the time of the invention was made for one ordinary skill in the art to incorporate Sasuta et al. and Talbot with Lewis to display the information for alerting the user.

As per claim 34:

Sasuta et al. and Talbot disclose “a method according to claim 32”. Sasuta et al. and Talbot do not disclose, “comprising indicating a change in ciphering mode is indicated with a flashing light”. However, Lewis discloses “a change in ciphering mode is indicated with a flashing light” in (Col 20 lines 10-15, and Col 16 lines 40-67).

Therefore, it would have been obvious at the time of the invention was made for one ordinary skill in the art to incorporate Sasuta et al. and Talbot with Lewis to display the information for alerting the user.

As per claim 97:

Sasuta et al. disclose “a data processor external to a mobile station and capable of use with the mobile station for communication between the

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external data processor and a mobile communication network via the mobile station, the mobile station being capable of communication in at least one enciphered mode of communication and in at least one unciphered mode of communication (Col. 3 line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.), the external data processor comprising an input for receiving from the mobile station, information concerning a ciphering mode used in communication between the mobile station and the mobile communication network, and means responsive to information received from the mobile station for indicating a ciphering mode used in communication between the mobile station and the mobile communication network” (Col. 3 line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.).

Sasuta et al. disclose the display unit (Col. 3, lines 31-39 and Fig. 1 from Sasuta et al.) and Talbot discloses “indication to the user of the ciphering mode used in communication between the mobile station and the mobile communication network” (Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25; Col. 9, lines 39-50 from Talbot).

Therefore, it would have been obvious at the time of invention was made for having ordinary skill in the art to modify Sasuta’s teaching with Talbot since one would be motivated to maintaining secure information synchronization on a control channel that will not reduce the efficiency of

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a secure radio communication system (Col. 2, lines 32-34 from Sasuta et al.).

Sasuta et al. and Talbot do not disclose indicating the cipher mode to the user comprises the display unit. However, Lewis discloses the mobile station comprises visual display to indicate the secure communication status to the user (Col. 20, lines 10-15 from Lewis).

Therefore, it would have been obvious at the time of the invention was made for one ordinary skill in the art to incorporate Sasuta et al. and Talbot with Lewis to display the information for alerting the user.

9. Claims 35 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasuta et al. and Talbot and further in view of Kniffin et al, US Patent No. 6072402, hereinafter "Kniffin"

As per claims 35 and 70:

Sasuta et al. and Talbot disclose "a method and apparatus according to claims 28 and 68 characterized in that the means for indicating a change in the cipher mode by the flashing light and vibration. Sasuta et al. and Talbot do not teach a change in the cipher mode causing to generate vibration. However, Kniffin discloses "Secure Entry System with Radio Communications" invention, which including a signaling means to alert

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the user, such as beeping, vibrating, or displaying in (Col 7 lines 10-15, and Col 10 lines 10-20).

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to incorporate alert mechanism in Kniffin with Sasuta et al. and Talbot for sensing different event and conveniently alerting the user.

10. Claims 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasuta et al. and Talbot and further in view of Serbetcioglu et al, US Patent No. 5719918, hereinafter "Serbetcioglu", and further in view of Kniffin.

As per claims 44 and 46-47:

Sasuta et al. and Talbot disclose "a method according to claim 19, wherein the mobile station is capable of a first type of communication and an indication of a cipher mode". Sasuta et al. and Talbot do not expressly disclose "a second type of data communication, the method comprising indicating a ciphering mode of the second types of communication to a use of the mobile station". However, Serbetcioglu does teach a second type of data ciphering mode communication (Col 9 lines 15-50). In addition, Kniffin does teach a method of alert the user at different events (Col 7 lines 10-15, and Col 10 lines 10-2). Therefore, it

would have been obvious at the time of the invention was made for one having ordinary skill in the art to incorporate Sasuta et al. and Talbot with Serbetciouglu to implement two types of data ciphering communication in a wireless network and then incorporate Kniffin to monitor different events of power fluctuation to alert the user of an incoming communication type ciphering events.

As per claim 45:

Sasuta et al., Talbot, Serbetciouglu, and Kniffin disclose “a method according to claim 44, wherein the first type of communication is a telephone call and said second type of data communication is a short message (SMS)” in (Serbetciouglu, Col 7 lines 10-15).

11. Claims 37-43, 75-76, 80, 88-89, 92, 125-127 and 129-131, 149-151, and 154-155 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasuta et al. and Talbot and further in view of Kennedy et al, European Patent No. 0680171A2, hereinafter “Kennedy”.

As per claims 37, 75, 87, 125, and 149:

Sasuta et al. and Talbot disclose “a method and apparatus according to claims 36, 74, 86, and 124”. However, Sasuta et al. and Talbot do not expressly disclose “the said cipher indication memory block makes an

interrupt request in response to a change in the cipher mode indication data field”. However, Kennedy discloses said cipher indication memory block makes an interrupt request in response to a change in the cipher mode indication data field in (Col 4 lines 8-13).

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to modify Sasuta et al. and Talbot to incorporate Kennedy’s feature to electronically controller the mode of the communication.

As per claims 38, 41, 76, 88, 92, 126, and 150:

Sasuta et al., Talbot, and Kennedy disclose “a method and apparatus according to claims 37, 40, 75, 87, 86, and 125, wherein the user interface block detects said interrupt request and sends an inquiry to the cipher indication memory block to inquire about the state of the cipher mode indication data field, and the cipher indication memory block returns an indication of the state of said cipher mode indication data field in response to said inquiry” in (Col 4 line 5 to Col 5 line 28 from Kennedy) and (Col. 9 lines 45-50 and 67-68; Col. 10, lines 1-8 from Talbot) and (Col. 3 line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.).

As per claims 39, 40, 43, and 127:

Sasuta et al., Talbot, and Kennedy disclose “a method and apparatus according to claims 36, 38, 42, and 126, wherein the mobile station comprises a cipher mode indicator and the user interface block controls the cipher mode indicator according to said indication of the state of the cipher mode indication data field” in (Col 4 line 5 to Col 5 line 28 from Kennedy); (Col. 9 lines 45-50 and 67-68; Col. 10, lines 1-8 from Talbot); and (Col. 3 line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.).

As per claims 42, 80, and 154:

Sasuta et al. and Talbot disclose “a method and apparatus according to claims 36 and 74, further comprising a user interface block, wherein the user interface block is operable to send repeated inquiries to the cipher indication memory block about the state of the cipher mode indication data field ; (Col. 9 lines 45-50 and 67-68; Col. 10, lines 1-8 from Talbot); and (Col. 3 line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.).

Sasuta et al. do not expressly disclose the remaining limitation of the claim. However, Kennedy disclose each inquiry being separated in time from the next by a predetermined interval and the cipher indication memory block is operable to return an indication of the state of the

cipher mode indication data field in response to each inquiry” in (Col 4 line 5 to Col 5 line 28 from Kennedy).

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to incorporate the features in Kennedy to Talbot and Raith to electronically control the mode of the communication.

As per claim 89:

Sasuta et al., Talbot, and Kennedy disclose a mobile station according to claim 88, wherein said user interface block is configured to control said means for indicating a ciphering mode to a user of the mobile station in response to said indication of the state of the cipher mode indication data field (Col 4 line 5 to Col 5 line 28 from Kennedy) and (Col. 3 line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.) and (Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25 from Talbot).

As per claims 130:

Sasuta et al., Talbot, and Kennedy disclose “an apparatus according to claim 124, further comprising a user interface block, wherein the user interface block is operable to send repeated inquiries to the cipher indication memory block about the state of the cipher mode indication

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data field, each inquiry being separated in time from the next by a predetermined interval and the cipher indication memory block is operable to return an indication of the state of the cipher mode indication data field in response to each inquiry” in (Col 4 line 5 to Col 5 line 28 from Kennedy); (Col. 9 lines 45-50 and 67-68; Col. 10, lines 1-8; Col. 11, line 59 to Col. 12, line 3 and Col. 8, lines 3-25 from Talbot); and (Col. 3 line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.).

As per claims 129, 131, 151 and 155:

Sasuta et al., Talbot, and Kennedy disclose “an apparatus according to claim 128 and 130, wherein the user interface block is operable to control the cipher mode indicator according to said indication” in (Col 4 line 5 to Col 5 line 28 from Kennedy); (Col. 9 lines 45-50 and 67-68; Col. 10, lines 1-8 from Talbot); and (Col. 3, line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.).

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12. Claims 49-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasuta et al. and Talbot in view of Kennedy and Lewis et al, US Patent No. 6192255, hereinafter "Lewis".

As per claim 49:

Sasuta et al. and Talbot disclose "a method according to claim 19". However, Sasuta et al. and Talbot do not disclose "the mobile station is used in connection with a data processor external to the mobile station for communication between the mobile communication network and the external data processor, the external data processor comprising a display unit, the method comprising indicating a ciphering mode used in data communication between the mobile station and the mobile communication network on the display unit of the external data processor". However, Kennedy does teach a mobile station is used in connection with a data processor external to the mobile station, and the external data processor comprising a display unit (Figure 2, and Col 1 lines 1-5). The external data processor is another mobile station in connection with the mobile station. The display unit is shown in Figure 9. In addition, Lewis does teach "the indication alert on the display of the ciphering mode" in (Col 19 lines 50-57, and Col 20 lines 10-15). The indication alert gets generated from the power fluctuation sensed by the sensor circuit. Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to modify

Sasuta et al. and Talbot to incorporate Kennedy's and Lewis's teaching to create a complete solution to electronically control the cipher communication and conveniently display the status of the communication for the user.

As per claim 50:

Claim 49 rejection basis is incorporated. Further, Lewis teaches "the external data processor further comprises an acoustic signal forming element, the method comprising indicating a change in ciphering mode used in data communication between the mobile station and the mobile communication network is indicated with the acoustic signal forming element of the external data processor" in (Col 5 lines 10-25).

As per claim 51:

The rejection basis of claim 49 is incorporated, wherein mobile station comprises a cipher indication memory block which maintains a cipher mode indication data filed indicative of a ciphering mode used in communication between the mobile communication network and the mobile station, the method comprising sending an indication of the state of the cipher mode indication field from the mobile station to the external data processor" in (Col 4 line 5 to Col 5 line 28 from Kennedy); (Col. 9

lines 45-50 and 67-68; Col. 10, lines 1-8 from Talbot); and (Col. 3, line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.).

As per claim 52:

The rejection basis of claim 49 is incorporated, wherein the mobile station and the external data processor are connected by means of a connection bus” in (Fig 1, Col 3 line 60 to Col 4 line 12 from Talbot).

As per claims 53:

The rejection basis of claim 49 is incorporated. Sasuta et al., Talbot, Kennedy, and Lewis further disclose the mobile station comprises a cipher indication memory block which maintains a cipher mode indication data field indicative of a ciphering mode used in communication between the mobile communication network and the mobile station, the method comprising receiving at the mobile station a cipher mode inquiry message from the external data processor and sending an indication of the state of the cipher mode indication data field from the mobile station to the external data processor responsive to said cipher mode inquiry message” in (Col 4 line 5 to Col 5 line 28 from Kennedy) and (Col. 9 lines 45-50 and 67-68; Col. 10, lines 1-8 from Talbot) and (Col. 3 line 24-39; Col. 3, line 60 to Col. 4 line 17; Fig. 1 from Sasuta et al.).

13. Claims 140-141 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasuta et al. and Talbot in view of Raith, US Patent No. 5237612, hereinafter "Raith".

As per claims 140:

Sasuta et al. and Talbot disclose a mobile station according to claim 139. Sasuta et al. and Talbot do not expressly disclose wherein the mobile station is configured to determine the ciphering mode to be used in communication between the mobile communication network and the mobile station by performing a location update procedure. However, Raith discloses wherein the mobile station is configured to determine the ciphering mode to be used in communication between the mobile communication network and the mobile station by performing a location update procedure (Col. 2, line 67 to Col. 3, line 11; Col. 17, lines 5-34; Col. 19, lines 46-61 from Raith).

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to modify Sasuta et al. and Talbot to incorporate Raith's teaching to provide adaptable authentication of a mobile station within a radio network.

As per claims 141:

Sasuta et al. and Talbot disclose a mobile station according to claim 136. Sasuta et al. and Talbot do not expressly disclose wherein the mobile station is configured to determine a ciphering mode to be used in communication between the mobile communication network and the mobile station during a communication handover procedure that occurs when the mobile station moves between a first part of the mobile communication network and a second part of the mobile communication network. However, Raith discloses wherein the mobile station is configured to determine a ciphering mode to be used in communication between the mobile communication network and the mobile station during a communication handover procedure that occurs when the mobile station moves between a first part of the mobile communication network and a second part of the mobile communication network (Col. 2, line 67 to Col. 3, line 11; Col. 17, lines 5-34; Col. 19, line 46 to Col. 20, line 14 from Raith).

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to modify Sasuta et al. and Talbot to incorporate Raith's teaching to provide adaptable authentication of a mobile station within a radio network.

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14. Claim 147 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasuta et al. and Talbot in view of Fujiwara et al., US Patent No. 5266947, hereinafter "Fujiwara".

As per claims 147:

Sasuta et al. and Talbot disclose a mobile station according to claim 142, wherein the mobile station is configured to indicate a change in ciphering mode. Sasuta et al. and Talbot do not expressly disclose vibration is used to indicate mode change. However, Fujiwara discloses that the event occurs (i.e., changing mode of operation) can be associated with vibration (Col. 3, lines 7-23 from Fujiwara).

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to modify Sasuta et al. and Talbot to incorporate Fujiwara's teaching to provide notification to a mobile station when certain event occurs.

Response to Arguments

15. Applicant's amendment, filed on Jan. 09, 2009, has Claims 19, 59, 62-64, 74-82, 85-94, 122, 124-132, and 135 amended and Claims 136-156 newly added.

16. Applicant's arguments are moot in view of the new ground of rejections based on the newly found reference by Sasuta et al. (U. S. Patent 5,502,767) in combination with other previously cited prior art. Please refer rejections above.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Chang et al. (U.S. Patent 5,329,573) disclose Apparatus and methods for providing cellular mobile telecommunication service in accordance with the requirements of the Global Systems for Mobile Communications (GSM) standard. A modular switching system is provided which performs the functions of the mobile switching center plus those of a home location register, authentication center, visitor location register, and equipment identity register. The latter functions are advantageously spread among the modules of the switching system, thus avoiding the getting started cost of expensive dedicated data bases. A wireless global switching module advantageously switches mobile communications control messages among the modules of the system and between the modules and the base station systems, and terminates signaling links between the mobile switching center and the base station systems.

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18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yin-Chen Shaw whose telephone number is 571-272-8593. The examiner can normally be reached on 8:15 to 4:15 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached 571-272-3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YCS

Jan. 31, 2009

/Kambiz Zand/

Supervisory Patent Examiner, Art Unit 2434

